



YOUR LETTERS

MAILBOX

Another month, another sackful of broadband queries about exchange upgrades and speed anomalies. Luckily for you, we're coming up with new words to describe how bad it all is

★ Cell control Struggling with a spreadsheet error



Sorry if I'm the 191st person to point out some small errors and omissions in your 'How To... Calculate mortgage payments in Excel' article in *Shopper 244*.

You told us to drag cell E3 before you said what should go in it. You did not tell us the contents for G3, either. I guess it should contain something like `=IF(J2<0.001,0,B$5)?` Also, cell J3 should have `=J2-I3`, not cell J2. I have made a similar sheet myself, but found that my figures never match the actual. Are there not issues here as to when the lender assigns charges to the account – for example, daily or monthly?

A more serious omission is that you don't handle changes in interest rates – something that affects most mortgages on a regular basis. That would make the sheet a running record of your mortgage. The impact of future changes in interest rates can then also be seen.

Nick Hoare

Thanks for that, Nick. In fact, the spreadsheet provided on the cover disc was correct, but the magazine didn't quite line up with it. For clarification, cell E3 should be `=IF(AND(J3<0.001, G3>0),"Y","")`, while the other two corrections as noted above will work.

The problem with mortgages and how they're calculated is that each financial institution has a slightly different way of working things out, including whether

interest is charged monthly or daily. Depending on the exact date you took out a mortgage, you'll get slight variations in monthly payments. Our spreadsheet assumes that interest is monthly and that your mortgage starts on the first day of the month. That said, the differences are really small, and the spreadsheet will still let you see the impact of making overpayments both on capital outstanding and on the length of mortgage.

It's true that our spreadsheet doesn't let you track a mortgage over its term with changing interest rates, although you can change the interest rate for the whole sheet to see how an increase in interest rates will affect your payment.

For those interested, Nick has created a new version of the spreadsheet that lets you enter new interest rates next to the month of change, so you can track your mortgage over its entire term. It's available for download now from www.shopperexpert.co.uk/mortgage/MortgageCalculator.xls.

Interest Rate	Monthly Interest Rate	Payment Date
5.50%	0.46%	1-Apr-2012
	0.46%	1-May-2012
	0.46%	1-Jun-2012
	0.46%	1-Jul-2012
	0.46%	1-Aug-2012
	0.46%	1-Sep-2012
	0.46%	1-Oct-2012
	0.46%	1-Nov-2012
	0.46%	1-Dec-2012
	0.46%	1-Jan-2013
	0.46%	1-Feb-2013
	0.46%	1-Mar-2013
	0.46%	1-Apr-2013
	0.46%	1-May-2013
	0.46%	1-Jun-2013

▲ Nick's spreadsheet lets you track changes to interest rates over the term of the mortgage

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INSIDER INFORMATION



I work for BT, and would like to reply to the letter in which AT Jeffrey asks how he can get BT to upgrade his service (*Letters, Shopper 244*). BT Wholesale publishes a list of exchanges that are to be upgraded through the Exchange Activate programme on its website (www.btwholesale.com). You need to register in order to download the list.

This allows businesses, councils, governments or ISPs to pay for a portion of the exchange (in blocks of 30 users) to be upgraded for broadband. At around £30,000, it is expensive and so uses the older fixed-rate product equipment. Over the past few years the Scottish Executive has paid for Exchange Activate to be put in place in every Scottish exchange that BT Wholesale said it was not financially viable to do so. It is now a new process to upgrade a large number of these to fully upgraded exchanges with 100 per cent capacity and ADSL Max, which is offering speeds of up to 8Mbit/s.

To be honest, even if I didn't work for BT, I would still agree with its decision on these exchanges. Typically, it looks to recover 50 per cent of the cost in the first three years. Ask Virgin Media to install the fibre network on the same margins and you'd have a tough time convincing it.

Name withheld

We can fully understand BT's point of view about not upgrading exchanges that aren't financially viable. As a private company, BT has to remain profitable in order to survive. Unless the government steps in and takes responsibility for running the infrastructure, it's unlikely that this situation will change.

Still, it's refreshing to see that there are at least options available to force exchanges to be upgraded in the meantime. This won't solve everyone's problems, so we'd recommend that anyone who lives in an area without broadband but has mobile phone reception should look into mobile broadband. We'll be looking at these services in depth in next month's *Mobile Expert*.



▲ You will find detailed information on the current status of broadband from your local telephone exchange at www.samknows.com

EXCHANGE OF IDEAS



In your reply to AT Jeffrey's letter in *Shopper 244*, you said that it could be difficult to find out the schedule for telephone exchange upgrades. I recommend that you have a look at www.samknows.com/broadband. If you click on the 'Find your telephone exchange' link and type in your telephone number or postcode, you can find detailed information on your local exchange, its current broadband status and when it's due to be upgraded.

For my exchange (Bowmansgreen, near St Albans) I can see that Be broadband is set as being ready for service from 31st March 2008. This would at least prompt a call to Be to see if it's ready for customers from my exchange. This site is therefore a good starting point for checking out your local facilities and finding out when an exchange is due an upgrade.

Steve Greenwood

Thanks for that information, Steve. It's certainly a good starting point to find out the status of your exchange and how close it is to being upgraded.

It's worth noting that the telephone exchange information also includes details on whether cable internet is available, so you can quickly find out your broadband information.

CORE VALUES



I was hoping you could offer some advice. I'm afraid I don't know too much about the technical side of computers. Recently I ordered a Chillblast Anaconda PC with an Intel Core 2 Duo E8500 processor, but I was emailed to say that this part of the PC is out of stock. I can wait for it or have the Core 2 Quad Q6700 instead. Could you advise me as to which would be the best to choose, as I haven't got a clue?

S Keen

Both processors cost the same amount of money, so the good news is you're not getting ripped off. Beyond that, the best processor for you will really depend on how you want to use your computer.

As its name suggests, the Core 2 Duo E8500 has two processor cores, while the Q6700 has four. This may imply that the Q6700 is twice as fast as the E8500, but it isn't as simple as that. For multiple cores to be used properly, you either need software that's written specially for the job – called multithreaded – such as most video-editing software, or you need to run lots of applications at the same time.

Many applications, particularly games, aren't written to take advantage of dual-core – let alone quad-core – processors, so you'll probably find that the E8500 is faster in a lot of cases. This processor runs at 3.16GHz compared to the Q6700's 2.66GHz.

The Q6700 is a great processor, but it's most useful if you run lots of applications at the same time, or you do a lot of video editing or encoding. If you don't then you'll probably find that the E8500 is a better choice.

OBSERVING THE SPEED LIMITS



I'm currently with BT Broadband on an 'up-to' 8Mbit/s connection and I'm always going to www.speedtest.net to test the speed. Lately, I've been getting 7.5Mbit/s a lot – I live a few hundred yards from an exchange – but imagine



▲ The desktop Intel Core 2 Duos have different model names to the mobile versions and fit into different motherboards

my surprise when one day I got 9.1Mbit/s. I rechecked and got 8.9Mbit/s. Is this right?

Paul Smith

It's perfectly possible for this to be right, particularly as you live so close to the exchange. The speed of your broadband connection is determined by the synchronisation speed with the equipment in your telephone exchange. If you live really close and aren't suffering from any interference, then your modem can actually connect at a slightly faster speed than you're paying for. When the network is fairly quiet then it is possible to achieve these incredible download speeds.

WHAT'S IN A NAME?



Your review of processors (*Labs, Shopper 244*) was interesting. My main reason for contacting you is to ask if you can explain why companies such as Dell use the Intel 'Tnnn' numbering scheme on its website, such as for its Inspiron laptops? It is difficult to relate its processors to what you tested in your article. Is Dell's numbering a deliberate obfuscation?

Martin Allen

Don't worry, this isn't a deliberate attempt by Dell to mislead anyone. It's more a slight confusion over the way that Intel brands its processors. A few years ago, Intel had very different names for its mobile and desktop processors. Since the advent of its Core technology, though, both the desktop and mobile processors are Core 2 Duo chips.

The way to spot the difference is by the model number. Mobile processors all start with a T, such as the T7100. Desktop chips start with an E, an X (Extreme version), Q (quad-core) or QX (quad-core Extreme). What you're seeing on Dell's website is the listings for its laptops.

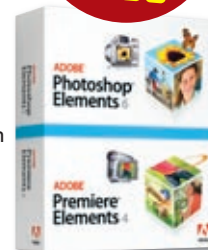
We didn't review any of the mobile processors because they fit into a different socket type, so you need a special motherboard to fit one. These tend to be expensive, and aren't ideal for most people. The mobile processors also have a slower frontside bus (FSB) speed than

WRITE IN AND WIN!

If you want to make the most out of your home movies and photographs, then Adobe's Photoshop Elements 6 and Premiere Elements 4 are the best and easiest way to do so. If you fancy getting your hands on these products, there's no need to put your hand in your pocket; all you have to do is write a great letter. Get it printed as our Star Letter, and a copy of both applications will be winging its way to you in the post.

Photoshop Elements 6 is the best home photo-editing application. Its powerful features are taken from the full Photoshop application, so you can get the same results, but Elements is a lot easier to use. Premiere Elements 4 does a similar job for movie making, pulling its features from the high-end Premiere software, but making it all easier to use so you'll be able to produce Hollywood-style movies from the comfort of your home.

STAR PRIZE
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PLUS!

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the desktop processors, so aren't generally as quick. If you're planning to build a new desktop PC, any of the processors we've recommended will be suitable.

ARE SPEED TESTS ACCURATE?



I subscribe to Virgin Media's 20Mbit/s broadband connection and I have been using www.speedtest.net

for about a year now to monitor what I'm actually getting at different times of the day. The results vary tremendously over a typical day. What is really apparent from running these tests over a period of time is the speed variance you get between the different servers and the time of day you run the tests.

For example, I've just run a test using the London (Namesco) server. I got 19,756Kbit/s, which is close to the full speed I pay for. Running the same test using the Maidenhead server gave me 8,509Kbit/s, but testing again five minutes later with the same server gave me 16,293Kbit/s.

Aren't all these tests subject to the vagaries of the internet? These must include how much traffic these servers are processing at any particular time, how many other speed tests are being run at the same time, the distance to the server (if I use the Sydney server, I'm lucky to get 2Mbit/s) and what connection speed the server has to the internet.

My point is, how do you test accurately and when do you know your result is correct? All I know is that most of the time I get 70 per cent of the speed I'm paying for, and most of my friends who've changed from cable to copper systems aren't.



▲ Testing using the recommended server should provide accurate results, but there are lots of factors than can affect speed

So isn't it time the powers that be stopped these companies advertising up to 8Mbit/s when they know full well they can never achieve anything even close to that speed, regardless of which server you use for testing?

Kevin Taylor

All results in some way or another are accurate. Any speed test that you run tells you exactly how fast your connection currently is when

tested against a specific server. There are many reasons that you can get varying results, including many of the reasons that you talk about here.

Distance from the server you're testing with isn't necessarily a limiting factor; it's more likely to be an issue of bandwidth. When you test your connection to a foreign server, your traffic is being run over international data pipes.

Depending on the country and the route it takes ➔

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to reach it, you may find that your data is being sent over a slow connection, hence the download speed that you're seeing. Typically, connections to foreign countries suffer from lower bandwidth than is available locally.

In fairness to all ISPs, then, testing with foreign servers isn't so much a measure of your broadband speed, but a measure of how quick the connection to the other country is. The slower speed you got from www.speedtest.net by testing with the Maidenhead server is probably down to one of two things: either your ISP doesn't have a particularly fast link to this server, or this test server doesn't have the capacity of the London one.

When we've used the test before, we've found that sticking with the default server (London in our case) has delivered pretty stable results no matter what time of day we test it. It's a good server to test on; all ISPs should have a good connection to the capital, as this is where the London Internet Exchange (LINX, www.linx.net) is located. This network lets ISPs' networks connect to each other and to networks abroad quickly. Without LINX, the internet would be a very slow place for us in the UK.

Testing with the default settings should give you a fairly accurate result of how fast your actual connection to the internet is. Of course, this can vary during the day, particularly if your ISP is oversubscribed. By testing throughout the day, you can find out if you've got a stable connection speed or if your ISP has too many users on it.

In our broadband survey (the results of which will be revealed in our next issue), we've collected thousands of findings from all over the country and at different times of day. The result for each ISP will be a fair average of how quick each one actually is. That said, if you are constantly getting near the speed that you pay for, then you've got a great connection that's probably worth staying with.

BROADLY SPEAKING



In your response to Neil Postlethwaite's letter ('Milton Keynes Does Have Broadband', *Shopper* 244), I like the new word you coined to describe broadband that fails to live up to expectations: broadbad. It describes perfectly my own situation where, after moving out to the country, my broadband speed went from a 19.6Mbit/s cable connection to 1.7Mbit/s on a supposedly 'up to 8Mbit/s' ADSL connection. I'm assuming your new word was deliberate rather than a typo.

John Chapman

Glad you like the new word. There was definitely a Freudian slip in our typing there, but we like the new word, too. Hopefully, next month when we reveal the results of our broadband survey we'll be able to invent another word: broadgood.

A *Shopper* mug should be just the thing for you to make a refreshing cup of tea in, until you can find out who the UK's best ISP is and hopefully change to a faster connection. **CS**

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